

EXHIBIT 19

**UNITED STATES DISTRICT COURT FOR
THE DISTRICT OF MASSACHUSETTS**

COMMONWEALTH OF
MASSACHUSETTS, et al.

Plaintiffs,

v.

NATIONAL INSTITUTES OF HEALTH;
MATTHEW MEMOLI, M.D., M.S., in his
official capacity as Acting Director of the
National Institutes of Health; U.S.
DEPARTMENT OF HEALTH AND
HUMAN SERVICES; and DOROTHY
FINK, M.D., in her official capacity as
Acting Secretary of the U.S. Department of
Health and Human Services,

Civil Action No. _____

Defendants.

DECLARATION OF DENISE BARTON

I, Denise Barton, declare as follows:

1. I am a resident of the Commonwealth of Massachusetts. I am over the age of 18. I have been an attorney since 1994 and am licensed to practice in the Commonwealth of Massachusetts. If called as a witness, I could and would testify competently to the matters set forth below.
2. I am currently employed by the University of Massachusetts, in its Office of the General Counsel, as its Chief Deputy General Counsel.
3. As Chief Deputy General Counsel for the University of Massachusetts, I have personal knowledge of the matters set forth below or have knowledge of the matters based on my review of information and records provided to me by University of Massachusetts employees and believe that information to be true.
4. The University of Massachusetts includes its five campuses (the University of Massachusetts

Amherst, the University of Massachusetts Boston, the University of Massachusetts Chan Medical School, the University of Massachusetts Dartmouth, and the University of Massachusetts Lowell), as well as the University of Massachusetts Office of the President.

See M.G.L. ch. 75. The University of Massachusetts maintains business records in the ordinary course of University of Massachusetts business which include, *inter alia*, records concerning funding received from the National Institutes of Health by the University of Massachusetts.

5. I am providing this declaration to explain certain impacts of National Institutes of Health (“NIH”) Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates* (“NIH IDC Notice”), which purports to immediately reduce indirect costs payments to 15%.
6. The NIH IDC Notice severely impacts the University of Massachusetts in its entirety: all five campuses will suffer short-term and long-term detriment because of the NIH IDC Notice’s impact. People will lose their livelihoods, research advances in the world’s most deadly diseases will be imperiled in ways that are likely unrecoverable and, as a result, people will likely needlessly suffer the consequences, including illness and death. I have provided the following information, in this foreshortened time period, to explain the NIH IDC Notice’s impact on just two of the University of Massachusetts’ campuses and the people whose research they serve: the University of Massachusetts Chan Medical School (“UMass Chan Medical School”) and the University of Massachusetts Amherst (“UMass Amherst”), reserving rights to supplement this declaration with further information concerning the impact on those campuses as well as the impacts on the remainder of the University of Massachusetts.

7. In Federal fiscal year 2024, University of Massachusetts campuses received NIH funding to support over 501 projects, totaling \$248 million dollars, of which more than \$80 million dollars were for IDCs.
8. UMass Chan Medical School is the Commonwealth of Massachusetts' only public medical school. As such, UMass Chan Medical School serves a unique role in the education of physicians, nurses, and scientists as well as in the performance of research that serves the public good.
9. In keeping with the University of Massachusetts' public mission, UMass Chan Medical School focuses its research efforts on addressing unmet medical needs in ways that benefit all people in the Commonwealth and beyond.
10. To carry out its public medical research mission, UMass Chan Medical School relies on NIH funding. NIH funding is divided into direct costs ("DC") and indirect costs ("IDC"). The DC portion of NIH funding pays for such things as the research staff who perform the research, the research reagents they use, and other expenditures made by research staff in performing the work itself. The IDC portion of the funding supports such things as the expenses associated with the administrative staff, including salaries, required to maintain rigorously compliant research operations and the highly specialized laboratory and clinical research facilities in which the research is performed, including, but not limited to, special air handling requirements, research animal quarters, and research facilities suitable for optimizing biosafety and radiation safety.
11. NIH IDC helps to defray, but does not totally cover, costs associated with the conduct of UMass Chan Medical School research that are not directly paid by a grant. The NIH's

reduction in IDC would severely hamper NIH-funded research at UMass Chan Medical School in at least the following ways:

- a. Conduct of many areas of laboratory research relies on the availability of sophisticated equipment, often provided by an institution, like UMass Chan Medical School. Even if an NIH grant covers the cost of a piece of equipment, the IDC does not cover certain significant expenses related to that equipment, including the space and cost of installation and maintenance including renovations to physical structures and wiring. UMass Chan Medical School also has to provide necessary infrastructure (for example, some equipment requires the use of distilled water; many pieces of equipment require linkage to a computer and network for data transfer) and pay for services to keep the equipment in good shape. Loss of IDC will curtail the ability of UMass Chan Medical School to provide and keep necessary equipment in good shape. Malfunctioning equipment can produce faulty data and loss of equipment would bring research relying on that equipment to a halt, which could erase several years of progress on a project or grant. Though IDC dollars do not cover the total costs UMass Chan Medical School incurs in completing a project, they do greatly reduce them.
- b. IDC also pays a portion of the costs associated with maintaining a workforce that includes many highly-skilled employees that support research. These workforce members include veterinarians and technicians skilled in animal care, technicians skilled in the safe handling and disposal

of radioactive substances or toxic chemicals, nurses and study coordinators skilled in clinical trials support and keeping study participants safe, statisticians and individuals skilled in bioinformatics whose skills are critical to effective study design and analyses, and staff members that ensure that human subjects research is compliant with federal and state requirements. These individuals would lose their jobs if UMass Chan Medical School does not intake adequate IDC to afford their salaries. Loss of the individuals that comprise this workforce would bring research to a halt.

12. UMass Chan Medical School has a Negotiated Indirect Cost Rate Agreement (“NICRA”) with NIH, effective as of 6/6/23. Ex. A.
13. The IDC Rate in UMass Chan Medical School’s NICRA is 67.5%.
14. UMass Chan Medical School receives approximately \$200 million dollars in funding annually from NIH. Of that total annual amount, approximately \$138 million dollars are for DCs and approximately \$62 million dollars are for IDCs, based on the NIH IDC rate of 67.5%, with certain direct cost categories (such as equipment, patient care costs, and subcontracts) exempted from calculating the IDC, resulting in a blended IDC rate of just under 45% on the NIH grant portfolio of UMass Chan Medical School. The need for these IDCs to perform the research funded by NIH grants is evaluated by NIH periodically, and UMass Chan Medical School has calculated and demonstrated to NIH that its IDCs exceed (by approximately 45%) what is paid for through NIH IDC designated funding

15. If implemented, the NIH IDC Notice cutting IDC funding to 15% would result in a loss to UMass Chan Medical School of \$40 to \$50 million annually that UMass Chan Medical School uses to support its research programs.
16. The loss of these funds will immediately impact UMass Chan Medical School's ability to draw critical funds used to pay expenses associated with utilities and basic maintenance on the operational research facilities, debt service, payroll, and other infrastructure associated with UMass Chan Medical School's research and clinical trials, examples of which follow.
17. UMass Chan Medical School's use of IDCs was planned as the primary source of funding for the operating costs (utilities and required maintenance) and for coverage of debt service obligations. UMass Chan Medical School would be forced to cover those obligations with other funds, which would result in two remaining options, to run operating deficits which would be funded from reserves, or to furlough employees or do across-the-board salary reductions. This could then result in downstream consequences that would damage UMass Chan Medical School's prospects for future success including, but not limited to, an adverse effect on bond ratings. UMass Chan Medical School also is a major stimulatory factor on the economy in Worcester county, which would have adverse consequences to the level of commerce and employment in the community.
18. UMass Chan Medical School draws from committed NIH funds on a biweekly basis. At the time of the next draw, if the funds are diminished in accord with the NIH IDC Notice, the reduced IDC rate will impact UMass Chan Medical School significantly: it will need to reduce expenditures associated with ongoing medical and scientific research and clinical trials by approximately \$4 million per month, which would lead to an operating deficit and the potential for negative consequences including furloughs, layoffs, delayed payments on

our debt, adverse impact on the credit rating of the University, and inability to meet other obligations and/or to cease other operations.

19. If UMass Chan Medical School cannot continue to fund payroll with the already-committed NIH IDC funding, this will not only result in people losing their livelihoods and patients losing or suffering consequences to their lives, it will in the near and long term undermine some of the greatest assets that the University of Massachusetts and the Commonwealth possess: the human workforce that drives medical and scientific innovation and saves lives every day.
20. Such a precipitous loss of funding may well force UMass Chan Medical School to reduce its research and clinical study activity to, by way of example only, at or near the “COVID shutdown” level of functioning adopted in April and May of 2020. At that point in 2020, UMass Chan Medical School staffed the lab facilities only at about 15% of the baseline level of staffing, which was the minimum sufficient to maintain the viability of irreplaceable cell lines and laboratory animals. It is not possible at this time to determine if such a level of shutdown could ameliorate the financial impact of the implementation of the NIH IDC Notice, but one thing is clear: If UMass Chan Medical School is forced, by the implementation of the NIH IDC Notice, to suspend or cancel ongoing clinical trials for potentially life-saving investigational therapies, the consequences to individual patients could include their death or the advancement of their condition to the point where recovery from it is no longer possible. In almost all circumstances, even a pause will render it difficult if not impossible to continue the work because of numerous factors, not least of which is the loss of the core and highly skilled workforce necessary to conduct the research.
21. NIH funding supports a large segment of UMass Chan Medical School’s research effort.

NIH funds are awarded competitively based on rigorously reviewed grant applications that are very selectively awarded to only that research that is impactful on human health and of the highest caliber.

22. Approximately one third of UMass Chan Medical School's clinical trials are funded by the NIH.
23. In addition, UMass Chan Medical School's UMass Center for Clinical and Translational Science is one of 60 leading medical institutions nationwide funded by the NIH-NCATS Clinical and Translational Science Awards (CTSA) Program. The CTSA Program supports a national network of medical institutions that speeds the translation of research discoveries into improved care. The institutions offer expertise, resources and partnerships at the national and local levels to improve the health of individuals and communities. The CTSA Program also provides education, training and career support at all levels. All of this makes use of specialized clinical trial facilities whose operations and maintenance are funded through NIH-IDCs.
24. UMass Chan Medical School's research ranges from basic science breakthroughs to the development and delivery of advanced therapies, like gene therapy and RNA therapeutics. For example, UMass Chan Medical School research has led to breakthroughs in neurologic diseases such as Amyotrophic Lateral Sclerosis (ALS), genetic diseases such as Tay-Sachs, cystic fibrosis, Duchenne muscular dystrophy and sickle cell disease, as well as in diseases such as cancer, cardiovascular disease, and emerging infectious diseases.
25. Also by way of example, UMass Chan Medical School's scientists have developed platform technologies based on discoveries in RNA biology, including the work of UMass Chan Medical School's Nobel Laureates, Craig Mello and Victor Ambros. These platform

technologies have, in turn, led directly to novel gene therapies and RNA therapeutics that are being used at UMass Chan Medical School – and around the world – to treat previously incurable diseases.

26. NIH funding also supports a large proportion of the clinical trials integral to UMass Chan Medical School's research work including, but not limited to, supporting the funding of the research staff who oversee and directly perform clinical trials, many addressing diseases for which the current therapy is inadequate.
27. UMass Chan Medical School currently has 529 active clinical trials, with 10,987 people enrolled as clinical trial participants. Those people range in age from newborn to over 65 years old.
28. Of the 529 active clinical trials currently underway at UMass Chan Medical School, 339 (65%) of those clinical trials are therapeutic, meaning that those clinical trials are investigating and currently providing access to innovative new treatments for a broad range of diseases, including cancer, lupus and autoimmune disorders, congenital disorders, psychiatric disorders (such as schizophrenia and severe depression), skin diseases (such as vitiligo and psoriasis), neurological diseases (such as Alzheimer's and other dementias, multiple sclerosis and ALS) and neurodevelopmental disorders (such as autism).
29. The implementation of the NIH IDC Notice will likely result in the suspension and/or cancellation of ongoing clinical trials for potentially life-saving investigational therapies. The consequences to individual patients could include their death or the advancement of their condition to the point where recovery from it is no longer possible.

30. A few examples of people who have benefitted from the UMass Chan Medical School clinical trials conducted in facilities maintained with NIH-IDC funding or who are part of research or clinical trials reliant upon NIH-IDC funding include:

- a. *Impact on the lives of patients with rare diseases.* A 12-month-old infant was referred to UMass Chan Medical School after being diagnosed with a rare, fatal genetic disease called Tay-Sachs disease. Researchers at UMass Chan Medical School, supported by NIH funded staff, services, and facilities, provided the infant with a completely novel experimental gene therapy that was not available from any commercial biopharma company because of the market limitations inherent in the rarity of the condition.

The infant, along with her family, traveled to UMass Chan Medical School in Worcester, Massachusetts and safely received the therapy using a variety of NIH-supported services. While the therapy has not been a complete cure, the progression of the disease has slowed and the child has survived and has retained some abilities that have allowed her to meaningfully interact with her family approximately a year after the treatment was given.

- b. *Life-saving experimental treatments.* The lives of a western Massachusetts mother and her adult son were saved by UMass Chan Medical School's clinical research support, after they accidentally ate toxic mushrooms. Upon their arrival in Worcester, Massachusetts they began treatment with Dr. Stephanie Carreiro, emergency physician and toxicologist, which, in life-saving part, involved getting special

permission from the FDA to provide an antidote that is currently in investigation. Obtaining and administering the experimental antidote was enabled by infrastructure, services, and procedure provided by the NIH-funded UMass Center for Clinical Science, including the UMass Chan IRB, Office of Clinical Research, and UMMH-UMass Chan Investigational Pharmacy. In addition, Dr. Carreiro also benefitted from CTSA Program funding through a UMCCTS KL2 Scholar Award that provided training in clinical research.

c. *Improvement in the quality of the lives of patients with chronic conditions.*

A 28 year old pharmaceutical scientist from Pennsylvania, diagnosed with lupus at age 22, came to UMass Chan Medical School with lupus symptoms that impacted her ability to attend college classes and work to participate in an individualized clinical research study exploring the use of CAR T cell treatment in lupus nephritis for severe or nonresponsive lupus. This patient is one of only a dozen patients in the United States to have undergone CAR T cell treatment for lupus. This patient's first treatment in March, 2024 required a two-week hospital stay, during which the patient underwent lymphodepletion chemotherapy, an infusion of their CAR T cells, and was monitored by UMass Chan Medical School clinical research personnel in the Blood and Marrow Transplant program.

d. *Improving treatment options and preventative medicine.* The Individual Genomic Variation Consortium (“IGVP”) is a partnership between

scientists within the National Human Genome Research Institute (one of NIH's Institutes), industry partners and universities, including UMass Chan Medical School. UMass Chan Medical School investigators have been pinpointing tens of thousands of positions in the human genome which may influence disease. In order to apply this knowledge to improve treatment options and preventative medicine, scientists need to have a better understanding of how these regions function and where in the body they are active. The work UMass Chan Medical School is doing in this project is a predictive modeling component of the IGVF Consortium, which aims to systematically study the functional impact of genetic variants and their influence on human diseases and traits by developing and applying cutting-edge computational and statistical methods to predict the functional impacts of disease-associated genetic variants. The \$737,341 total grant award from NIH to UMass Chan Medical School for this work includes both the DCs and the IDCs and the impact of the implementation of the NIH IDC Notice on not just UMass Chan Medical School but on the other grantees working on this project, would be significant.

31. UMass Amherst will also be severely impacted by the implementation of the NIH IDC Notice. UMass Amherst has a Negotiated Indirect Cost Rate Agreement ("NICRA") with

NIH. Ex. B.

32. In Federal fiscal year 2024, UMass Amherst will receive approximately \$44.8 million dollars in funding from NIH. Of that total amount, approximately \$31.7 million dollars are for DCs

and approximately \$13.1 million dollars are for IDCs, based on the NIH Federal IDC rate of 61%, with certain DC categories (such as equipment and subcontracts) exempted from calculating the IDC, resulting in a blended IDC rate of approximately 41.3 % on the NIH grant portfolio of UMass Amherst.

33. The work done by UMass Amherst on these projects provides education and training in Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Agriculture, Biology, Public Health and Health Sciences, Mathematics, Chemistry, Psychology, and other programs. UMass Amherst, along with other UMass campuses, is the largest provider of Science, Technology, Engineering and Mathematics (“STEM”) workforce to the Massachusetts economy.
34. In the last decade, UMass Amherst has hired 37 new faculty members and 28 staff members in Life Sciences through strategic investment in the Institute for Applied Life Sciences, established with an investment of \$95 million from the Commonwealth and more than \$50 million from the University of Massachusetts for the Institute for Applied Life Sciences’ facilities and equipment. The Institute relies on a portion of the IDC funding provided to the campus for grants associated with the Institute, including the IDC funding provided by the NIH.
35. There are 30 Life Sciences Core Facilities with professional staffing at UMass Amherst; in total, there are 90 such Core Facilities across the University of Massachusetts. To operate its Core Facilities, UMass Amherst purchases necessary and sophisticated scientific equipment. This equipment, and the professional staff who work there, are administered by UMass Amherst’s Institute for Applied Life Sciences. Running the Core Facilities requires significant capital investments and also requires continuous funding for the operations that

support hundreds of researchers on not only the UMass Amherst campus, but across all University of Massachusetts campuses as well as small businesses in Massachusetts. Funding for the debt service on the University of Massachusetts' capital investment, staffing, and operations relies in part on the IDCs to which NIH has committed as well as IDCs from other federal agencies. The implementation of the NIH IDC Notice will likely cause UMass Amherst to reduce the scope and support for Core Facilities which rely on approximately 4% of the IDC funding committed to UMass Amherst for a significant portion of its budget, including the IDC funding provided by the NIH.

36. Another example of the detrimental impact on UMass Amherst, and the people its work serves, that will result from the implementation of the NIH IDC Notice, concerns the NIH-funded National Institute on Aging project “Massachusetts AI and Technology Center for Connected Care in Aging and Alzheimer's Disease (MAITC)”. The project is a collaboration of UMass Amherst and Brigham and Women’s Hospital, and also involves Brandeis University, Massachusetts General Hospital, and Northeastern University. MAITC fosters interdisciplinary research on the development, validation, and translation of AI-enhanced technologies to improve connections between older adults, caregivers, and clinicians in order to more effectively support healthy aging and the care of people living with Alzheimer’s disease and related dementias. MAITC provides support to other universities and private sector entities to support projects that accomplish this mission. See, e.g., <https://massaitc.org/>. Since fiscal year 2021, UMass Amherst has received a total of \$18 million dollars to support this work, with \$12.2 million dollars in DCs and \$5.8 million in IDCs. UMass Amherst will meet its obligations under the current NIH agreement, but if the IDC rate is reduced to 15%, the IDCs paid by NIH to UMass Amherst will be reduced to

\$1.83 million, a reduction in IDC reimbursement of nearly \$4 million from the amount NIH agreed to pay. This would eventually require a significant reduction in the scope of the work and, in doing so, would negatively impact the improvements the research seeks to make in the lives of the people – those with Alzheimer’s disease and dementia – and those who care for them.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on February 9, 2025, at Westborough, Massachusetts.

/s/ Denise Barton

Denise Barton
Chief Deputy General Counsel
University of Massachusetts, Office of the General Counsel
50 Washington Street
Westborough, MA 01581

EXHIBIT A

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1043167352A1

ORGANIZATION:

University of Massachusetts Medical School
 55 Lake Ave.
 North – S1-858
 Worcester, MA 01655

Date: 06/06/2023

FILING REF.: The preceding
 agreement was dated
 09/16/2022

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

| RATE TYPES: | FIXED | FINAL | PROV. (PROVISIONAL) | PRED. (PREDETERMINED) |
|-------------|-------|-------|---------------------|-----------------------|
|-------------|-------|-------|---------------------|-----------------------|

EFFECTIVE PERIOD

| TYPE | FROM | TO | RATE(%) | LOCATION | APPLICABLE TO |
|-------|------------|---------------|---------|---------------|--|
| PRED. | 07/01/2022 | 06/30/2026 | 67.50 | On-Campus | Research |
| PRED. | 07/01/2022 | 06/30/2026 | 26.00 | Off-Campus | Research |
| PRED. | 07/01/2022 | 06/30/2026 | 68.00 | On-Campus | Research DOD Contract |
| PRED. | 07/01/2022 | 06/30/2026 | 27.80 | Off-Campus | Research DOD Contract |
| PRED. | 07/01/2022 | 06/30/2026 | 18.25 | All Locations | OSA-CM (SR#3) |
| PRED. | 07/01/2022 | 06/30/2026 | 36.00 | On-Campus | Other Sponsored Activities |
| PRED. | 07/01/2022 | 06/30/2026 | 26.00 | Off-Campus | Other Sponsored Activities |
| PROV. | 07/01/2026 | Until Amended | | | Use same rates and conditions as those cited for fiscal year ending June 30, 2026. |

***BASE**

Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

ORGANIZATION: University of Massachusetts Medical School
AGREEMENT DATE: 06/06/2023

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

Fringe benefits applicable to direct salaries and wages are treated as direct costs.

TREATMENT OF PAID ABSENCES:

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

ORGANIZATION: University of Massachusetts Medical School
 AGREEMENT DATE: 06/06/2023

1. The following rate applies to research effort performed at the Massachusetts Biologics Laboratory (MBL):

| TYPE | FROM | TO | RATE |
|-------|----------|---------------|--|
| PRED. | 07/01/22 | 06/30/26 | 26.0% |
| PROV. | 07/01/26 | Until Amended | Use same rates and conditions as those cited for fiscal year ending June 30, 2026. |

The 26% rate noted above applies to the administrative costs of research at MBL. The facilities costs are directly charged for the space used by each project.

2. Fringe benefits are claimed using approved rates contained in the Massachusetts State-Wide Cost Allocation Plan. The following additional fixed fringe benefit charges are approved for the University:

| | FYE | FYE |
|---------------------------------|-----------|-----------|
| Workers' Compensation Insurance | 06/30/23 | .14%(S&W) |
| Medicare | (1) | (1) |
| Health and Welfare | .85%(S&W) | .77%(S&W) |
| Unemployment | (1) | (1) |

(1) Beginning for Fiscal Year 2008 the State negotiated rate incorporated Unemployment Insurance and Medicare in the Federally negotiated State "6B" rate.

3. Commonwealth Medicine is the public, non-profit consulting and service organization founded by the University of Massachusetts Medical School. The Other Sponsored Activities – Commonwealth Medicine (OSA-CM) base consists of the direct costs of public service programs that have evolved through partnerships with State agencies.

This separate OSA-CM rate receives an allocation of applicable general and administrative and information services costs only. Departmental administration, sponsored projects administration and facilities costs are not applicable to these programs.

This rate agreement updates fringe benefit rates.

** Your next fringe benefit proposal based on actual costs for fiscal year ending June 30, 2023 will be due in our office by December 31, 2023.

** Your indirect cost rate proposal for the fiscal year ending June 30, 2025 will be due in our office by December 31, 2025.

Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds \$5,000.

ORGANIZATION: University of Massachusetts Medical School
 AGREEMENT DATE: 06/06/2023

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its indirect cost pool as finally accepted: such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as indirect costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from indirect to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant or other agreement is reimbursing indirect costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of indirect costs allocable to these programs.

BY THE INSTITUTION:

University of Massachusetts Medical School

(INSTITUTION by:

63C9209F-F6B442E...

(SIGNATURE)

John C. Lindstedt

(NAME)

Executive Vice Chancellor, A&F

(TITLE)

June 27, 2023

(DATE)

ON BEHALF OF THE GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

Darryl W. Mayes -S

Digitally signed by Darryl W. Mayes -S
 DN: c=US, o=U.S. Government, ou=HHS, ou=PSC,
 ou=People, o=92342.19200300.100.1.1=2000131669,
 cn=Darryl W. Mayes -S
 Date: 2023.06.26 13:01:57 -04'00'

(SIGNATURE)

Darryl W. Maves

(NAME)

Deputy Director, Cost Allocation Services

(TITLE)

06/06/2023

(DATE)

HHS REPRESENTATIVE: Kathryn Dissinger

TELEPHONE:

(212) 264-2069

EXHIBIT B

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 043167352

DATE: 09/9/2022

ORGANIZATION:

FILING REF.: The preceding
agreement was dated
08/09/2021

University of Massachusetts at Amherst
 340 Whitmore Administration Bldg.
 181 Presidents Drive
 Amherst, MA 01003-9313

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: Facilities And Administrative Cost Rates

| | | | | |
|-------------|-------|-------|---------------------|-----------------------|
| RATE TYPES: | FIXED | FINAL | PROV. (PROVISIONAL) | PRED. (PREDETERMINED) |
|-------------|-------|-------|---------------------|-----------------------|

EFFECTIVE PERIOD

| TYPE | FROM | TO | RATE (%) | LOCATION | APPLICABLE TO |
|-------------|-------------|------------|-----------------|-----------------|-----------------------|
| FINAL | 07/01/2021 | 06/30/2022 | 59.50 | On-Campus | Research |
| PRED. | 07/01/2022 | 06/30/2023 | 60.50 | On-Campus | Research |
| PRED. | 07/01/2023 | 06/30/2024 | 61.00 | On-Campus | Research |
| PRED. | 07/01/2024 | 06/30/2025 | 61.50 | On-Campus | Research |
| PRED. | 07/01/2025 | 06/30/2026 | 62.50 | On-Campus | Research |
| PRED. | 07/01/2026 | 06/30/2027 | 62.50 | On-Campus | Research |
| FINAL | 07/01/2021 | 06/30/2022 | 26.00 | Off-Campus | Research |
| PRED. | 07/01/2022 | 06/30/2027 | 26.00 | Off-Campus | Research |
| FINAL | 07/01/2021 | 06/30/2022 | 61.50 | On-Campus | Research DOD Contract |
| PRED. | 07/01/2022 | 06/30/2023 | 62.50 | On-Campus | Research DOD Contract |
| PRED. | 07/01/2023 | 06/30/2024 | 63.00 | On-Campus | Research DOD Contract |
| PRED. | 07/01/2024 | 06/30/2025 | 63.50 | On-Campus | Research DOD Contract |
| PRED. | 07/01/2025 | 06/30/2026 | 64.50 | On-Campus | Research DOD Contract |

ORGANIZATION: University of Massachusetts

at Amherst AGREEMENT DATE: 9/9/2022

| TYPE | FROM | TO | RATE (%) | LOCATION | APPLICABLE TO |
|-------|------------|---------------|----------|------------|-----------------------|
| PRED. | 07/01/2026 | 06/30/2027 | 64.50 | On-Campus | Research DOD Contract |
| FINAL | 07/01/2021 | 06/30/2022 | 28.00 | Off-Campus | Research DOD Contract |
| PRED. | 07/01/2022 | 06/30/2027 | 28.00 | Off-Campus | Research DOD Contract |
| FINAL | 07/01/2021 | 06/30/2022 | 49.00 | On-Campus | Instruction |
| PRED. | 07/01/2022 | 06/30/2027 | 50.00 | On-Campus | Instruction |
| FINAL | 07/01/2021 | 06/30/2022 | 26.00 | Off-Campus | Instruction |
| PRED. | 07/01/2022 | 06/30/2027 | 26.00 | Off-Campus | Instruction |
| FINAL | 07/01/2021 | 06/30/2022 | 31.50 | On-Campus | OSA |
| PRED. | 07/01/2022 | 06/30/2027 | 32.00 | On-Campus | OSA |
| FINAL | 07/01/2021 | 06/30/2022 | 26.00 | Off-Campus | OSA |
| PRED. | 07/01/2022 | 06/30/2027 | 26.00 | Off-Campus | OSA |
| PROV. | 07/01/2027 | Until Amended | 62.50 | On-Campus | Research |
| PROV. | 07/01/2027 | Until Amended | 26.00 | Off-Campus | Research |
| PROV. | 07/01/2027 | Until Amended | 64.50 | On-Campus | Research DOD Contract |
| PROV. | 07/01/2027 | Until Amended | 28.00 | Off-Campus | Research DOD Contract |
| PROV. | 07/01/2027 | Until Amended | 50.00 | On-Campus | Instruction |
| PROV. | 07/01/2027 | Until Amended | 26.00 | Off-Campus | Instruction |
| PROV. | 07/01/2027 | Until Amended | 32.00 | On-Campus | OSA |
| PROV. | 07/01/2027 | Until Amended | 26.00 | Off-Campus | OSA |

***BASE**

Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

ORGANIZATION: University of Massachusetts
at Amherst AGREEMENT DATE: 9/9/2022

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: The off-campus rate will apply for all activities: a) Performed in facilities not owned by the institution and where these facility costs are not included in the F&A pools; or b) Where rent is directly allocated/charged to the project(s). Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.

Fringe benefits are claimed using approved rates contained in the Massachusetts State-Wide Cost Allocation Plan. The following additional fixed fringe benefit charges are approved for the University:

| | FYE 06/30/23 |
|------------------------------|---|
| Workers' Comp. Ins. | 0.19%(S&W) |
| Health & Welfare(1) : | \$17.00 per week - GEO |
| | \$19.00 per week - Post Doc. Fellows through 12/31/21 |
| | \$20.00 per week - Post Doc. Fellows 1/1/22 - 6/30/22 |
| | \$16.50 per week - All Other |
| Sick Leave Bank | 0.20%(S&W) |
| Post Doc. Fellows | 13.78% (Inclusive of health insurance, terminal leave, payroll tax and worker's Comp. Ins.) |
| Graduate Research Assistants | 15.63% (Inclusive of health insurance) |

(1) Health and Welfare - The State negotiated rate with collective bargaining units. The rate supports dental, and in some cases vision, health benefits which are provided directly by health and welfare trust funds to employees of the Commonwealth of Massachusetts and the University of Massachusetts.

** A fringe benefit rate proposal based on actual expenses for fiscal year ended June 30, 2022 is due by December 31, 2022.

** An indirect cost proposal based on actual expenses for fiscal year ended June 30, 2026 is due by December 31, 2026.

ORGANIZATION: University of Massachusetts at
Amherst AGREEMENT DATE: 9/9/2022

Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-Federal entity for financial statement purposes, or \$5,000.

ORGANIZATION: University of Massachusetts at
Amherst AGREEMENT DATE: 9/9/2022

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted: such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

University of Massachusetts at Amherst

(INSTITUTION)

DocuSigned by:

3C1AEC93FF6F431...

(SIGNATURE)

Andrew Mangels

(NAME)

Vice Chancellor A&F

(TITLE)

9/27/2022

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

Darryl W. Mayes -S

Digitally signed by Darryl W. Mayes -S
DN: c=US, o=U.S. Government, ou=HHS, ou=PSC,
ou=People, o9.2342.19200300.100.1.1=2000131669,
cn=Darryl W. Mayes -S
Date: 2022.09.23 14:15:25 -04'00'

(SIGNATURE)

Darryl W. Mayes

(NAME)

Deputy Director, Cost Allocation Services

(TITLE)

9/9/2022

(DATE) 7069

HHS REPRESENTATIVE:

Edwin Miranda

Telephone:

(212) 264-2069